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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,523	02/01/2001	Hideaki Machida	1022-01	4791

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IP DEPARTMENT OF PIPER RUDNICK LLP
ONE LIBERTY PLACE, SUITE 4900
1650 MARKET ST
PHILADELPHIA, PA 19103

EXAMINER

SIMONE, CATHERINE A

ART UNIT PAPER NUMBER

1772

DATE MAILED: 07/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,523

Applicant(s)

MACHIDA ET AL.

Examiner

Catherine Simone

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 10-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 10-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Withdrawn Rejections

1. The 35 U.S.C. 112 rejection of claims 1 and 3 of record in the Office Action mailed 12/3/03, Page 2, Paragraph #3 has been withdrawn due to the Applicants amendment filed 5/5/04.
2. The 35 U.S.C. 102 rejection of claims 1 and 3 as being anticipated by Sado et al. of record in the Office Action mailed 12/3/03, Page 3, Paragraph #5 has been withdrawn due to the Applicants amendment filed 5/5/04.
3. The 35 U.S.C. 103 rejection of claims 1 and 3 over Sado et al. in view of Voaden et al. of record in the Office Action mailed 12/3/03, Page 4, Paragraph #7 has been withdrawn due to the Applicants amendment filed 5/5/04.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
5. **Claims 1, 3 and 10-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Sado et al. (4,971,748).

Sado et al. discloses a polyimide molding of thermoplastic aromatic polyimide resin, comprising a wall defining an opening at one end and closed at an opposite end (Fig. 1, #11), and having a depth therebetween (see col. 6, line 57), wherein the wall thickness is between

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0.001 mm and 0.5 mm (see col. 5, lines 43-45), and the thermoplastic aromatic polyimide resin has a glass transition temperature between 200°C and 350°C (see col. 2, lines 36-40) and has a degree of elongation at break of from 50 to 2,000% at its glass transition temperature (see col. 2, lines 40-42), and wherein the polyimide molding has a plurality of repetitive patterns (see col. 5, lines 22-27). However, Sado et al. fails to disclose a ratio of depth to opening between 1.0 and 3.0. Sado et al., however, does teach a depth of 50 mm and a diameter of 200 mm (see col. 6, lines 56-58), as one example, which results in a ratio of depth to opening of 0.25. Therefore, the optimum range for the ratio of depth to opening would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end results as shown by Sado et al. Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the polyimide molding in Sado et al. with a ratio of depth to opening between 1.0 and 3.0, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in absence of showing unexpected results. *MPEP 2144.05 (II)*.

Regarding **claim 3**, note the wall thickness falls between 0.01 and 0.2 mm (see col. 5, lines 43-45). Regarding **claim 10**, note the repetitive patterns are cup container-shaped (see col. 5, lines 57-58). Regarding **claim 11**, note the glass transition point is between 220 and 300°C (see col. 2, lines 38-40). Regarding **claim 12**, note the elongation at break is from 300 to 800% (see col. 2, lines 40-42). Regarding **claim 13**, note the polyimide resin is a condensate of a carboxylic acid anhydride and a diamine (see col. 2, lines 59-63). Regarding **claim 14**, note the carboxylic acid anhydride is selected from the group recited in claim 14 such as 3,3',4,4'-benzophenonetetracarboxylic acid dianhydride (see col. 3, lines 20-35).

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Regarding **claim 15**, note the diamine is selected from the group recited in claim 15 such as 4,4'-diaminodiphenylether.

Response to Arguments


6. Applicant's arguments with respect to claims 1, 3 and 10-15 have been considered but are moot in view of the new ground(s) of rejection.

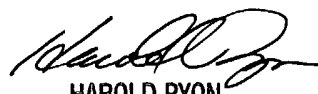
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (571)272-1501. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Catherine Simone
Examiner
Art Unit 1772
July 16, 2004


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

7/20/04